

IN THE CLAIMS:

Please CANCEL claim 1 without prejudice to or disclaimer of the recited subject matter.

Please ADD new claims 11-17, as follows. For the Examiner's convenience, all claims currently pending in this application have been reproduced below:

1. (Cancelled)

11. (New) An exposure apparatus comprising:

a projection optical system of a catadioptric type; and
an optical element disposed on a reciprocating light path of said projection optical system, said optical element being movable to change aberration of said projection optical system to be produced due to exposure.

12. (New) An apparatus according to claim 11, wherein the aberration includes at least one of spherical aberration, astigmatism and curvature of field.

13. (New) An apparatus according to claim 11, wherein the aberration is produced as a result of at least one of a pressure, heat and an illumination condition.

14. (New) An exposure apparatus comprising:

a projection optical system of a catadioptric type, said projection optical system including (i) a first mirror for reflecting light from a light source thereby to define a reciprocating

light path, and (ii) a second mirror disposed at a position not intercepting a path of the light from the light source to the first mirror, for directing light from the first mirror along a one-way light path off the reciprocating light path; and

an optical element disposed on the reciprocating light path of said projection optical system, said optical element being movable to change aberration of said projection optical system to be produced due to exposure.

15. (New) An apparatus according to claim 14, wherein the aberration includes at least one of spherical aberration, astigmatism and curvature of field.

16. (New) An exposure apparatus comprising:

a projection optical system of a catadioptric type;
an optical element disposed on a reciprocating light path of said projection optical system; and
an actuator for actuating said optical element to change aberration of said projection optical system.

17. (New) An apparatus according to claim 16, wherein the aberration includes at least one of spherical aberration, astigmatism and curvature of field.